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EXAMINER	
D AGOSTA, STEPHEN M	

ART UNIT	PAPER NUMBER
2683	4

DATE MAILED: 05/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/899,612	MOHI, NORMAN	
	Examiner	Art Unit	
	Stephen M. D'Agosta	2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-22 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-22 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 05 July 2001 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

Acknowledgement is given for the case having benefit to a Provisional Application (60/218,454) with a filing date of 7-14-2000.

Information Disclosure Statement

An information disclosure statement (IDS) was submitted on 1-27-03 and accordingly, the information disclosure statement is being considered by the examiner.

Specification

Claim 1 objected to because of the following informalities: The term "suitable" is used and does not render an explicit limitation. It may be more beneficial to just remove this word and leave the statement as "radio positioning in a coordinate system" and therefore leads one to read the specification for any clarification. Appropriate correction is required. Failure to correct this may lead to a USC 112 rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-12, 14 and 16 rejected under 35 U.S.C. 102(e) as being anticipated by Mohan US 6,121,922 (hereafter Mohan).

As per claim 1, Mohan teaches a system for locating and tracking at least one rover unit from a mobile controller unit (title, abstract, C1, L65 to C2, L43) comprising;

a mobile controller unit (figure 4) comprising;

a cellular telephone module (#320);
a GPS receiver/processor module (#360);
a specially programmed computer (#330);
a display (#334);
a power source (see "battery" under #330);
a rover unit (figure 1) comprising;
a cellular/satellite telephone module (#540 – note that Mohan discloses use of cellular communications for tracking/monitoring which reads on a cellular satellite system. Also see figure 4 which labels the antenna for #320 as connecting to a "cellular satellite network");
a GPS receiver/processor module (#520);
a specially programmed computer (#515);
the mobile controller unit being programmed to have a find feature which includes selection of a command to establish a radio communication link with the rover (abstract teaches location is transmitted upon request from remote location/device), and
to obtain the rover's position information from the radio positioning module in a suitable coordinate system (C6, L30-32 and figure 4, #350), and
the controller unit being further programmed to calculate upon command the relative spatial position having the controller as center and absolute positions of the controller and the rover on a map whereupon the selected one of the relative spatial positions or the absolute map positions of the controller and the rover are available to be displayed on the display upon selection by the user (C6, L62 to C7, L17 teaches the controller having GPS and that location can be shown for both the mobile and rover in relation to each other on a computer screen. Also see figure 4, #350 and figure 5, #400 and #420).

As per claim 2, Mohan teaches claim 1 in which the controller unit and the rover unit use a commonly tracked suite of GPS satellites (figure 5 shows the tracking unit #400 and locating unit #420 in communication with at least one common GPS satellite #402 – the examiner notes that the units will receive GPS data from any GPS satellites that are in view to both).

As per claim 3, Mohan teaches claim 2 in which the controller unit is equipped with a compass to provide heading of the controller unit and to allow display of relative bearing to the rover (C6, L62 to C7, L17 teaches the system can display the mobile controller in relation to the rover while figure 4, #350 shows the rover (#352) in relation to the mobile controller and it's relative bearing, see upper right and lower left portion of #350 which gives a "digital compass heading").

As per claim 4, Mohan teaches a system for locating on demand a rover unit relative to a mobile controller unit (title, abstract and C6, L62 to C7, L17) comprising;
a mobile controller unit having a radio positioning receiver (figure 4, #330 and #360);

a radio communications module and a control system for sending instructions to a rover unit and for processing data received from a radio positioning module (abstract's last sentence teaches that a remote location, eg. the mobile controller, can send instructions to the rover and request that it transmit its location back to the mobile controller) ;

at least one rover unit having a radio positioning module (figure 1, #520),

a radio communications module (#540);

a control system for receiving instructions from a mobile controller unit (#515),

for sending data to a mobile controller unit whereby the controller may display position data of the rover and may display relative spatial position of the rover or absolute map position of the rover and the controller (figure 4, #350 and C6, L62 to C7, L17).

As per claim 5, Mohan teaches the system of Claim 4 in which the radio positioning module is a GPS module (figure 1, #520 and figure 4, #360).

As per claim 6, Mohan teaches the system of Claim 5 in which the controller unit is equipped with a compass to provide heading of the controller unit and to allow display of a relative bearing to the rover unit (C6, L62 to C7, L17 teaches the system can display the mobile controller in relation to the rover while figure 4, #350 shows the rover (#352) in relation to the mobile controller and it's relative bearing, see upper right and lower left portion of #350 which gives a "digital compass heading").

As per claim 7, Mohan teaches a system for locating and tracking at least one rover unit from a mobile controller unit (title, abstract, C1, L65 to C2, L43)) comprising;

a mobile controller unit (figure 4) comprising;

a radio communications module (#320);

a radio positioning module (#360);

a specially programmed computer (#330);

a display (#334);

a power source (see "battery" under #330);

a rover unit (figure 1) comprising;

a radio communications module (#540);

a radio positioning module (#520);

a specially programmed computer (#515);

the mobile controller unit being programmed to have a find feature which includes selection of a command to establish a radio communication link with the rover (abstract teaches location is transmitted upon request from remote location/device), and

to obtain the rover's position information from the radio positioning module in a suitable coordinate system (C6, L30-32 and figure 4, #350), and

the controller unit being further programmed to calculate upon command the relative spatial position having the controller as center and absolute positions of the controller and the rover on a map whereupon the selected one of the relative spatial positions or the absolute map positions of the controller and the rover are available to be displayed

on the display upon selection by the user (C6, L62 to C7, L17 teaches the controller having GPS and that location can be shown for both the mobile and rover in relation to each other on a computer screen. Also see figure 4, #350 and figure 5, #400 and #420).

As per claim 8, Mohan teaches a system for locating on demand a rover unit relative to a mobile controller unit (title, abstract and C6, L62 to C7, L17) comprising;

a mobile controller unit having a radio positioning receiver (figure 4, #330 and #360);

a radio communications module and a control system for sending instructions directly to a rover unit and for processing data received directly from a radio positioning module (abstract's last sentence teaches that a remote location, eg. the mobile controller, can send instructions to the rover and request that it transmit its location back to the mobile controller) ;

at least one rover unit having a radio positioning module (figure 1, #520),

a radio communications module (#540);

a control system for receiving instructions from a mobile controller unit (#515),

for sending data directly to a mobile controller unit whereby the controller may display position data of the rover and may make available for display relative spatial position of the rover or absolute map position of the rover and the controller (figure 4, #350 and C6, L62 to C7, L17).

As per claim 9, Mohan teaches claim 8 in which the controller unit receives radio positioning data from a radio positioning system and the rover unit receives radio positioning data from the same radio positioning system and the rover unit sends radio positioning data to the controller unit which compares the data to provide the relative spatial relationship of the rover unit and the controller unit (figure 5 shows both rover and controller receiving data from the same radio positioning system, #402 while C6, L62 to C7, L17 teaches displaying relative position of rover and controller per figure 4, #350).

As per claim 10, Mohan teaches claim 9 in which the radio positioning system is the GPS or any other satellite radio positioning system (figure 5, #402 is a GPS satellite).

As per claim 11, Mohan teaches claim 10 in which the controller unit and the rover unit use a commonly tracked suite of GPS or other system's satellites to provide relative spatial position (figure 5 shows a GPS constellation – see #402 and other GPS satellites which would be used if in view to rover/controller).

As per claim 12, Mohan teaches a method (figure 3) for locating a rover unit from a mobile controller unit (title, abstract)

in which the rover unit and the controller unit have cellular telephones capable of intra-communication of data (figure 1, #540 for rover – note that Mohan discloses use of

cellular communications for tracking/monitoring which reads on a cellular satellite system. Also see figure 4 which labels the antenna for #320 for controller as connecting to a "cellular satellite network") and

each have a radio positioning receiver capable of providing it's radio position information (figure 1, #520 and figure 4, #360), and the rover has a means for sending radio position information to the controller unit upon demand (abstract's last sentence teaches controller requesting rover's location) comprising;

opening a cellular telephone link between the controller and the rover starting a procedure in which the rover's radio position information is sent to the controller (abstract's last sentence along with figure 1, #540 and figure 4, #320);

comparing the rover's radio position information with the controller's radio position information to calculate relative spatial position quantities of the controller and the rover unit (C6, L62 to C7, L17);

displaying the relative spatial position information on a display associated with the mobile controller unit (figure 4, #350).

As per claim 14 Mohan teaches the method of claim 12 in which the radio positioning receivers track a satellite radio positioning system (figure 5 shows multiple GSP satellites that are tracked by rover and mobile controller, see GPS #402 and other GPS satellites).

As per claim 16, Mohan teaches a method (figure 3) for locating a rover unit from a mobile controller unit (title, abstract) in which the rover unit and the controller unit have radio communication capability between them (figure 1, #540 and figure 4, #320) such that the controller unit may upon query obtain information from the rover unit (last sentence of abstract) and

each of the controller unit and the rover unit has a radio positioning module for obtaining radio positioning information such that radio position information of the rover unit will upon query be sent to the mobile controller unit (figure 5 shows tracked/tracking units using GPS and Abstract teaches query sent and tracked unit sending location data) and

in which the mobile controller unit can process the radio position information to provide relative spatial relationship of the mobile control unit to the rover unit with periodic updates and displaying the relative spatial relationship on one or more displays associated with the mobile controller (C6, L62 to C7, L17 and figure 4, #350).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 13 and 15 rejected under 35 U.S.C. 103(a) as being unpatentable over Mohan as applied to claim 12 above, and further in view of Sheynblat US 5,831,576 (hereafter Sheynblat).

As per claim 13, Mohan teaches the method of claim 12 **but is silent on** in which the radio positioning receivers are GPS receivers and the radio position information is GPS pseudo-range and carrier phase information and the relative spatial position is determined using the information from commonly tracked satellites.

While the applicant states in their specification that the use of pseudo-range and carrier phase information is implemented using "known techniques with GPS" (specification page 5, L14-27), the examiner puts forth Sheynblat who teaches a GPS receiver that uses conventional pseudorange and carrier phase measurements to provide a directional indicator (C3, L13-15).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Mohan, such that pseudorange and carrier phase measurements are used to provide means for receiving said data from a GPS satellite and using it for positioning functions.

As per claim 15, Mohan in view of Sheynblat teaches the method of claim 13 further comprising;

providing a compass direction to the controller unit and displaying a relative bearing of the rover unit to the controller unit (C6, L62 to C7, L17 teaches the system can display the mobile controller in relation to the rover while figure 4, #350 shows the rover (#352) in relation to the mobile controller and it's relative bearing, see upper right and lower left portion of #350 which gives a "digital compass heading").

Claims 17 and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Mohan and further in view of Darnell et al. US 5,043,736 (hereafter Darnell).

As per claim 17, Mohan teaches a method (figure 3) for locating a rover unit from a mobile controller unit in which the rover unit and the controller unit have radio communication capability between them such that the controller unit may upon query obtain information from the rover unit (last sentence of abstract) and

each of the controller unit and the rover unit has a radio positioning module for obtaining radio positioning information such that radio position information of the rover unit will upon query be sent to the mobile controller unit (figure 5 shows tracked/tracking units using GPS and Abstract teaches query sent and tracked unit sending location data) and,

in which the mobile controller unit can process the radio position information to provide relative spatial relationship of the mobile control unit to the rover unit with periodic updates and displaying on one or more display associated with the mobile controller as selected by the user, (C6, L62 to C7, L17 and figure 4, #350).

an arrow showing the direction of the location of the to rover unit relative to the mobile controller unit and identification data representing the rover unit (figure 4, #352 shows the "rover" and an arrow-like representation which is interpreted as showing the direction of the rover relative to the mobile controller which would be at the middle of the X-Y coordinate map shown),

but is silent on a map showing the location of both the mobile controlled unit and the rover unit.

While Mohan does show a high-level map (figure 5 that locates both the tracked and locating units, #400 and #420 respectively), he does not explicitly say that the system provides this capability (eg. it appears to be used more for explaining how the system works rather than teaching it's capability), hence the examiner concludes that Mohan is silent on this limitation.

Darnell teaches a position locating system (title and abstract) that displays the location of a roving unit on a display map (figure 2). Since Mohan teaches locating both tracked and locating units, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Mohan, such that both rover and mobile controller are located on a map, to provide user-friendly navigation capability by using a map to navigate to the tracked unit.

As per claim 19, Mohan teaches the method of Claim 17 further comprising; providing a compass to the controller unit to enable displaying of the relative bearing of the rover unit to the controller unit (C6, L62 to C7, L17 teaches the system can display the mobile controller in relation to the rover while figure 4, #350 shows the rover (#352) in relation to the mobile controller and it's relative bearing, see upper right and lower left portion of #350 which gives a "digital compass heading").

Claim 18 rejected under 35 U.S.C. 103(a) as being unpatentable over Mohan in view of Darnell as applied to claim 17 and further in view of Kass US 5,389,934 (hereafter Kass).

As per claim 18, Mohan in view of Darnell teaches the method of Claim 17 further displaying one or more of the following;

the speed of movement of the rover unit (figure 4, #350 shows "velocity" in bottom left);

geographical coordinates of the rover unit (figure 4, upper fight shows 41.27.77N and 61.49.04 W which are interpreted as geographical coordinates), and

GPS satellites providing LAT, LANG and Altitude data (Mohan teaches use of GPS locating satellites, figure 5 – while GPS providing altitude data may not be widely known, the examiner has included US 6,46,788 (C5, 8-12) as a pertinent reference that is not cited which discloses this fact).

But is silent on

the distance of rover unit to the mobile controller unit;

a map display showing the location of the rover unit and trail indicia showing display a history of the location of rover unit over a specified period of time;

Darnell teaches a position locating system (title and abstract) that displays the location of a roving unit on a display map (figure 2). Since Mohan teaches locating both tracked and locating units, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Mohan, such that both rover and mobile controller are located on a map, to provide user-friendly navigation capability by using a map to navigate to the tracked unit.

Kass teaches a portable locating system (title, abstract) whereby multiple units can determine the distance (and/or altitude) between each other (C2, L43-54). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the combination of Mohan and Darnell, such that distance/altitude between rover and mobile controller is calculated, to provide information regarding how close the two units are with in three dimensions (ie. LAT, LONG and Altitude) since a user may be at a correct location but does not know how far up/down the tracked individual is, eg. if a person has been kidnapped and may be in a tall building or its basement, distance and altitude will enhance locating the individual).

Claims 20-21 rejected under 35 U.S.C. 103(a) as being unpatentable over Mohan in view of Darnell and further in view of Layson Jr. US 6,014,080 (hereafter Layson).

As per claim 20, Mohan teaches a method (figure 3) of finding a rover unit by use of a mobile controller unit comprising;

sending a query to the rover unit by signal from a radio communication module in the mobile controller unit to a radio communication module in the rover unit AND responding to the query, from the rover unit with radio positioning information obtained from a radio positioning module in the rover unit and sent to the mobile controller unit by way of the radio communication modules in each unit (last sentence of abstract along with GPS positioning and RF communications capability shown in figures 1 and 4);

comparing the radio position information sent to the mobile controller unit with radio positioning information received by the mobile controller unit by its own radio positioning module to determine relative spatial position and absolute position of the rover unit (C6, L62 to C7, L17);

displaying on one or more displays (figure 4, #350 shows a display for each remote locator device in operation);

an arrow showing the direction of the location of the rover unit relative to the mobile controller unit (figure 4, #352 shows the rover and an arrow pointing its direction as interpreted by the examiner);

the speed of movement of the rover unit relative to the controller unit (figure 4, #350 shows "velocity" in bottom left corner);

but is silent on

a map display showing the location of the rover unit and of the controller unit, and continuing to respond periodically with new radio positioning information;

Darnell teaches a position locating system (title and abstract) that displays the location of a roving unit on a display map (figure 2). Since Mohan teaches locating both tracked and locating units, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Mohan, such that both rover and mobile controller are located on a map, to provide user-friendly navigation capability by using a map to navigate to the tracked unit.

Layson teaches a tracking system (abstract) that transmits location, health and status to a monitoring facility at predefined intervals as defined by the supervising agency (C7, L55-60). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the combination of Mohan and Darnell, such that periodic radio positions are transmitted, to provide means for automatic transmission of location data instead of a more cumbersome manual process as defined by the monitoring personnel.

As per claim 21, Mohan in view of Darnell and Layson teaches the method of Claim 20 **but is silent on** further comprising;

providing by an optional selection on said map display showing the location of the rover unit also showing a series of indicia showing a history of the location of the rover unit.

As stated in claim 20, Darnell teaches use of a map for location purposes.

Layson teaches a tracking system (abstract) that can transmit location movement history of the tracked user/individual (C8, L54-58) at various times of the day.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the combination of Mohan, Darnell and Layson, such that user movement history can be selectively viewed on a map when required.

As per claim 22, Mohan in view of Darnell and Layson teaches the method of Claim 21 wherein the radio positioning modules are GPS modules and the rover unit and controller unit use information from commonly tracked satellites to provide relative spatial positions (figure 5 shows a GPS constellation – see #402 and other GPS satellites which would be used if in view to rover/controller).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

1. Carlsson US 6,466,788
2. Woo et al. US 5,627,548
3. Elliot US 6,243,039

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 703-306-5426. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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